CLAIMS:

1.   An apparatus for configuring a plurality of parameters of a target system having an
interface, the apparatus comprising:

5   (a) a virtual system hosted on a computer, said virtual system including:

(i) a collection tool supporting the interface of the target system, wherein
changes to the plurality of parameters are applied to the virtual system; and

(ii) an application tool for applying the changes of the plurality of
parameters in a batch-mode to the target system;

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(b) an interface to the virtual system interacting with the collection tool of the
virtual system to enable changes to the plurality of parameters to be communicated to the
collection tool, wherein the changes to the plurality of parameters are cumulated prior to
application to the target system by the application tool.

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2.   The apparatus of claim 1, wherein the interface includes means for querying the
virtual system to determine if a selected one of the plurality of parameters is visible on the
computer and if the selected one of the plurality of parameters is visible further including
means for obtaining a value of the selected one of the plurality of parameters and a valid
20   option specification to permit manipulation of the value by the collection tool.

3.   The apparatus of claim 1, wherein the collection tool includes a display output and
an input module, said display output presents a representation of the plurality of parameters
of the target system.

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4.   The apparatus of claim 3, further comprising a parameter display module in
communication with the display output and a display formulation module in
communication with the parameter display module to provide content for the
representation of the plurality of parameters for the target system.

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5.   The apparatus of claim 4, further comprising a parameter selection acceptor in communication with display formulation module for receiving input data from the input module

5   6.   The apparatus of claim 5, further comprising a configuration data file creator in communication with the parameter selection acceptor to execute a given configuration when the input data is a command to execute.

7.   The apparatus of claim 6, further comprising a configuration parameters relations

10   database accessible by the display formulation module for determining related parameters, selected from the plurality of parameters, that require configuration in response to changes to the plurality of parameters.

8.   The apparatus of claim 7, wherein the configuration parameters relations database

15   includes a hierarchical list of the plurality of parameters according to relations to each other.

9.   The apparatus of claim 7, wherein the configuration parameters relations database includes a categorical relations table for defining the plurality of parameters.

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10.   The apparatus of claim 8, further comprising a configuration data file creator communicating with the parameter selection acceptor and the parameter values database such that when the command to execute the given configuration is received the display formulation module detects the end of the hierarchical list in the configuration parameters

25   relations database to form a data file for configuration of the target system.

11.   The apparatus of claim 10, further comprising a system output interface in communication with the configuration data file creator to enable configuration of the target system.

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12.   A computer-readable medium having stored thereon computer executable instructions for configuring a plurality of parameters of a target system having an interface performing steps comprising:

        (a) providing a virtual system to emulate behavior of the target system as defined by the interface of the target system;

        (b) collecting and validating at least one change to the plurality of parameters by application to the virtual system; and

        (c) applying the at least one change of the plurality of parameters in a batch-mode to the target system.

13.   The computer-readable medium of claim 12, further comprising the step of providing a virtual interface to the virtual system, said virtual interface is representative of the interface of the target system.

14.   The computer-readable medium of claim 13, wherein step (b) includes: querying the virtual system to determine if a selected one of the plurality of parameters is visible to the virtual interface.

15.   The computer-readable medium of claim 14, further comprising: obtaining a value of the selected one of the plurality of parameters and a valid option specification.

16.   The computer-readable medium of claim 15, further comprising: making the value of the selected one of the plurality of parameter visible to the virtual interface to permit manipulation of the value.

17.   In a computer system, a method of creating a program using a graphical user interface for configuring a plurality of parameters of a target system having an interface, the method comprising the steps of:

(a) providing a virtual system to emulate behavior of the target system as defined by the interface of the target system;

(b) collecting and validating at least one change to the plurality of parameters by application to the virtual system; and

(c) applying the at least one change of the plurality of parameters in a batch-mode to the target system.

18.   The method of claim 17, further comprising the step of providing a virtual interface to the virtual system, said virtual interface is representative of the interface of the target system.

19.   The method of claim 18, wherein step (b) includes: querying the virtual system to determine if a selected one of the plurality of parameters is visible to the virtual interface.

20.   The method of claim 19, further comprising: obtaining a value of the selected one of the plurality of parameters and a valid option specification.

21.   The method of claim 20, further comprising: making the value of the selected one of the plurality of parameter visible to the virtual interface to permit manipulation of the value.

22.   A configuration apparatus for collection and batch-mode application of transactions defined by a plurality of settings for a target system having an operation, administration and maintenance (OAM) interface, the apparatus comprising:

5   (a) a virtual system having a host computer programmed to emulate functionality of the target system;

(b) a collection system interacting with the virtual system for establishing values for the plurality of settings; and

(c) an application system for applying the established values for the plurality of

10   settings to the target system in a batch-mode.

23.   The configuration apparatus of claim 22, further comprising a virtual interface to emulate the OAM interface of the target interface, said virtual interface interacting with the virtual system for querying the virtual system to determine if a selected one of the plurality

15   of settings is visible on the host computer and if the selected one of the plurality of settings is visible further including means for obtaining a value of the selected one of the plurality of settings and a valid option specification to permit manipulation of the value by the collection system.

20   24.   The configuration apparatus of claim 22, wherein the collection system includes a display output and an input module, said display output presents a representation of the plurality of settings of the target system.

25.   The configuration apparatus of claim 24, further comprising a setting display

25   module in communication with the display output and a display formulation module in communication with the setting display module to provide content for the representation of the plurality of settings for the target system.

26.   The configuration apparatus of claim 25, further comprising a setting selection

30   acceptor in communication with display formulation module for receiving input data from the input module

27.   The configuration apparatus of claim 26, further comprising a configuration data file creator in communication with the setting selection acceptor to execute a given configuration when the input data is a command to execute.

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28.   The configuration apparatus of claim 27, further comprising a configuration settings relations database accessible by the display formulation module for determining related settings, selected from the plurality of settings, that require configuration in response to changes to the plurality of settings.

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29.   The configuration apparatus of claim 28, wherein the configuration settings relations database includes a hierarchical list of the plurality of settings according to relations to each other.

15   30.   The configuration apparatus of claim 29, further comprising a configuration data file creator communicating with the setting selection acceptor and the setting values database such that when the command to execute the given configuration is received the display formulation module detects the end of the hierarchical list in the configuration settings relations database to form a data file for configuration of the target system.

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31.   The apparatus of claim 30, further comprising a system output interface in communication with the configuration data file creator to enable configuration of the target system.

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32.   A configuration method for collection and batch-mode application of transactions defined by a plurality of settings for a target system having an operation, administration and maintenance (OAM) interface, the method comprising the steps of:

(a) constructing a virtual representation in a software model of the target system;

5   (b) providing collection tools to interact with the virtual representation of the target system to establish values for the plurality of settings; and

(c) applying the established values for the plurality of settings to the target system in a batch-mode.

10   33.   The configuration method of claim 32, further comprising the step of providing a virtual interface to the virtual representation, said virtual interface emulating the OAM interface of the target system.

34.   The configuration method of claim 33, wherein step (b) includes: querying the
15   virtual representation to determine if a selected one of the plurality of settings is visible to the virtual interface.

35.   The configuration method of claim 34, further comprising: obtaining a value of the selected one of the plurality of settings and a valid option specification.

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36.   The configuration method of claim 35, further comprising: making the value of the selected one of the plurality of parameter visible to the virtual interface to permit manipulation of the value.